

PATENT ABSTRACTS OF JAPAN

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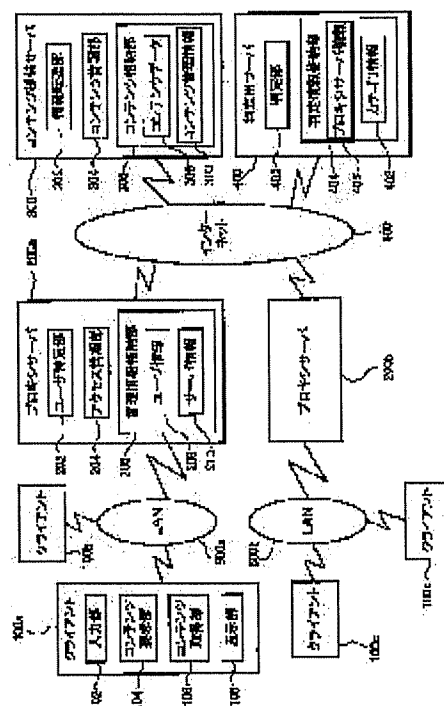
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(54) SERVICE PROVIDING SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide service different for every category to which a user belongs, without giving complication to the user.

SOLUTION: A proxy server 200a specifies a user A from the IP address of a client 100a accessing the server 200a, finds out a category CA, ciphers the category CA, and transmits the ciphered category CA to a contents providing server 300. The server 300 transfers information such as the IP address of the accessed server 200a and the category CA to a judging server 400. The server 400 decipheres the ciphered category and judges whether the IP address coincides with the IP address of a registered proxy server or not and whether the category coincides with a registered category or not. When the IP address and the category respectively coincide with the registered address and category, the server 300 reads out the contents data in accordance with the category and transmits the read data to the proxy server 200a.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the service provision system which can provide various services, such as offer of contents, according to the category to which a user belongs.

[0002]

[Description of the Prior Art] In recent years, various services, such as offer of contents, are increasingly provided via the Internet by development of the Internet.

[0003] If different service can be provided according to the category to which a user belongs when providing such service, the convenience for a user will also improve.

[0004] For example, when it is accessed by a certain Web server via the Internet from the computer connected to LAN of a certain school, If the Web server can provide the contents only for a student to access from a student and can provide the contents only for a teacher to access from a teacher, both sides can peruse the information to want appropriately and can acquire it.

[0005]

[Problem(s) to be Solved by the Invention] However, in the former, in order to realize providing different service for every category to which a user belongs in this way, when a user accesses the server, in order to identify and check the user, the input of ID or a password needed to be required of the user. Therefore, whenever the user accessed the server, the input of such ID or a password will be required of him, and he was dramatically complicated for the user.

[0006] Then, the purpose of this invention is to provide the service provision system which can provide different service for every category to which a user belongs without solving the problem of the above-mentioned conventional technology and giving a user complicatedness.

[0007]

[The means for solving a technical problem, and its operation and effect] In order to attain at least a part of above-mentioned purpose, the service provision system of this invention, The service provision server which it is a service provision system for providing service according to the category to which a user belongs, and can provide said service, Two or more clients which each user uses, respectively in order to receive offer of said service, The proxy server which acts for access to

said service provision server of two or more of said clients, Have a server for a judgment which performs the judgment about said category at least, and said proxy server, When there is a demand of offer of said service from a certain client, the user using this client is specified from the information about said client with a demand, With the providing request of said service, transmit to said service provision server and the category information about the category to which this user belongs said service provision server, Transmit said transmitted category information to said server for a judgment, and it is judged whether based on said transmitted category information, said category of said server for a judgment to which said user belongs corresponds with the registration category registered beforehand, Return the decision result to said service provision server, and said service provision server, When said category to which said user belongs is in agreement with said registration category from said returned decision result, let it be a gist to perform offer of said service according to said category to said client.

[0008] Thus, in a service provision system of this invention. When a client requires offer of service, After a proxy server specifies the user, it transmits to a service provision server and information about a category to which the user belongs in a service provision server. Transmit the category information to a server for a judgment, and in a server for a judgment. It judges whether the category is in agreement with a registration category, and the decision result is returned to a service provision server, and in a service provision server, when in agreement with a registration category from the decision result, it is made to provide service according to the category for a client.

[0009] Therefore, when a user wishes offer of service according to the service provision system of this invention, Since a proxy server specifies the user, transmits a category to which a user belongs to a service provision server instead of a client and is enabling discernment and a check of a user in the service provision server side, An input of ID or a password is not required of a user when providing service each time, and a user is released from complicatedness.

[0010] In a service provision system of this invention, said service provision server, Transmit said category information to said server for a judgment, transmit proxy server information about said accessed proxy server, and said server for a judgment, Judge whether it is the registration proxy server into which said proxy server is beforehand registered based on said transmitted proxy server information, and in being a registration proxy server, It is preferred to judge whether said category is a registration category beforehand registered about said proxy server based on said transmitted category information.

[0011] Thus, since that discernment and check which is a registration category about a proxy server which performed discernment and a check also with an accessed proxy server and, with which its discernment and check were able to be managed also about a category are performed, Service according to a category to which the user belongs can be certainly provided to a proper user.

[0012] In a service provision system of this invention, said proxy server enciphers said category information, and transmits to said service provision server, and, as for said server for a judgment, it is preferred to decrypt said enciphered category information and to judge based on decrypted category information.

[0013] When being sent to a server for a judgment via a service provision server by

constituting in this way from a proxy server, a possibility that a third party may throw a furtive glance at category information disappears.

[0014] In a service provision system of this invention, said service provision server and said server for a judgment may be built using one computer.

[0015] Thus, management of a server can be simplified by building a service provision server and a server for a judgment using one computer.

[0016] A concept of an invention of this invention which was explained above can be embodied as a service provision system, and also it can be embodied [a service provision server and a proxy server which are used for the service provision system, and] as the service provision method. Therefore, it is possible to do so the same effect as the above-mentioned service provision system also by such composition. In addition, it is also realizable in various modes, such as a computer program for building such a server, a recording medium which recorded the computer program, and a data signal embodied in a subcarrier including the computer program.

[0017]

[Embodiment of the Invention] Hereafter, an embodiment of the invention is described based on an example. This explanation is given in order of the item hung up over below.

A. — composition [of a service provision system]: — activity [of B. service provision system]: — hardware-constitutions [of C. service provision system]:

— D. modification: [0018] A. composition of a service provision system: Drawing 1 is a block diagram showing the composition of the service provision system as one example of this invention. In the service provision system of this example, contents are provided as offer of the service to a user.

[0019] As shown in drawing 1, the service provision system of this example, The clients 100a-100d used by each user and the proxy servers 200a and 200b which act for access instead of the clients 100a-100d, It corresponds to the contents offer server 300 and the contents offer server 300 for providing each user with contents, and has the server 400 for a judgment for judging the category etc. to which a user belongs.

[0020] Among these, the clients 100a and 100b and the proxy server 200a are connected via LAN(Local Area Network)500a, and the clients 100c and 100d and the proxy server 200b are connected via LAN500b. The proxy servers 200a and 200b, the contents offer server 300, and the server 400 for a judgment are connected via the Internet 600.

[0021] The input part 102 for the clients 100a-100d being constituted by common PC (personal computer), and inputting the directions from a user, It has the contents request part 104 which requires transmission of contents data based on the directions from a user, the contents acquisition section 106 which acquires the transmitted contents data, and the indicator 108 for displaying the acquired contents. In drawing 1, although only four are indicated, the number beyond it exists actually and two or more users may use the client, respectively.

[0022] The user specific part 202 for the proxy servers 200a and 200b being constituted by the common computer for servers, and specifying a user, It has the access control section 204 for accessing various servers instead of a client, and the management information storage section 206 for storing various management information. Among these, the information (User Information) 208 about the user who

[0030] In drawing 1, although only one is indicated, two or more servers 400 for a judgment may exist corresponding to them, when two or more contents offer servers 300 exist on the Internet 600.

[0031] B. activity of a service provision system: Then, explain the activity of this example concretely using drawing 2 – drawing 5. The flow chart which shows procedure [in / in drawing 2 / the client 100a of drawing 1], The flow chart which shows procedure [in / in drawing 3 / the proxy server 200a of drawing 1], the flow chart which shows procedure [in / in drawing 4 / the contents offer server 300 of drawing 1], and drawing 5 are flow charts which show the procedure in the server 400 for a judgment of drawing 1.

[0032] As a premise, to each clients 100a–100d. When logged in to LAN500a connected and 500b, respectively, local IP (Internet Protocol) address is assigned from the managing server (not shown) which manages each LAN500a and 500b.

[0033] In each clients 100a–100d. As a proxy server which setting out of the purport that it connects as setting out for accessing the Internet 600 using a proxy server, respectively is made, and is used, URL (Uniform Resource Locator) and the global IP address of the proxy servers 200a and 200b connected to the same LAN500a and 500b are set up. That is, in the clients 100a and 100b, the proxy server 200b by which the proxy server 200a connected to the same LAN500a is connected to the same LAN500b by the clients 100c and 100d will be set up, respectively. These setting out is performed by inputting into a predetermined setting-out item within the application software for the Internet connectivities which work by the clients 100a–100d.

[0034] After being based on such a premise, operation in case the user A wishes offer of the contents of the request on the Internet 600 using the client 100a is explained.

[0035] When URL with which the user A operates the input part 102 of the client 100a, and indicates the existence position of the contents to be is inputted (Step S102 of drawing 2), the contents request part 104, Based on URL and the IP address of a proxy server which were set up previously, the proxy server 200a connected to the same LAN500a is accessed, and URL of the inputted contents is transmitted to the proxy server 200a (Step S104).

[0036] On the other hand, the IP address of the client 100a which the user specific part 202 has accessed in the proxy server 200a, The IP address which the managing server which manages LAN500a assigned, After specifying the user A using the client 100a with reference to User Information 208 which compares, draws the accessed name of the client 100a, and is stored in the management information storage section 206, Category CA to which the user A belongs is calculated (Step S202 of drawing 3).

[0037] In User Information 208, as mentioned above as a name of a client, when the IP address which a managing server assigns is registered, from the accessed IP address of the client 100a, directly, the user A can be specified and category CA can be calculated.

[0038] Then, the access control section 204 receives URL of the contents transmitted from the client 100a (Step S204), and the server information 210 stored in the management information storage section 206 is referred to, URL of the contents judges whether the resource of the registration contents offer server is pointed out (Step S206). And when resources other than a registration contents offer server

are pointed out as a result of the judgment, as it is, the server is accessed (Step S208) and processing corresponding to the server is performed.

[0039] On the other hand, when the resource of the registration contents offer server is pointed out as a result of the judgment, the access control section 204 accesses the registration contents offer server which has the contents as a resource based on the above-mentioned URL which received (Step S210). The access control section 204 enciphers using a secret key (Step S212), and category CA of the user A who asked previously And the enciphered category CA, It transmits to the registration contents offer server which accessed the above-mentioned URL which shows the existence position of the contents (resource) of which it is expected with the Request to Send of contents data (Step S214). That from which a secret key differs in each registration proxy server from the server 400 for a judgment beforehand is passed.

[0040] On the other hand, supposing the accessed registration contents offer server is the contents offer server 300, for example, in the contents offer server 300. After the information transfer part 302 acquires a partner computer with access, i.e., the IP address of the proxy server 200a, information, including (Step S302 of drawing 4), the transmitted above-mentioned category CA, etc., is received (Step S304). And the information transfer part 302 transmits the acquired IP address and the received information to the server 400 for a judgment (Step S306).

[0041] In the server 400 for a judgment, the judgment part 402 receives the IP address and information which have been transmitted (Step S402 of drawing 5), and refers to the proxy server information 406 stored in the determination information storage 404 first, The transmitted IP address judges whether it is in agreement with the IP address of a registration proxy server (Step S404). In this case, it will be judged with being in agreement with the IP address of the registration proxy server contained in the proxy server information 406, since the transmitted IP address is an IP address of the proxy server 200a which is a registration proxy server. However, the computer which has accessed the contents offer server 300 temporarily, When it is proxy servers other than a registration proxy server or is not a proxy server but a client, it is judged with the transmitted IP address not being in agreement with the IP address of the registration proxy server contained in the proxy server information 406.

[0042] Next, when [which is in agreement with the IP address of a registration proxy server] it judges, out of the transmitted information, the judgment part 402 extracts the enciphered category and decrypts it using a public key (Step S406). When the enciphered category cannot be extracted at this time or a category is not able to be decrypted using a public key, the judgment part 402 judges with a category not existing in the transmitted information (Step S408).

[0043] When a category is able to be decrypted, next, the judgment part 402, With reference to the category information 408 stored in the determination information storage 404, the decrypted category judges whether it is in agreement with the category (registration category) registered about the proxy server 200a which is a registration proxy server (Step S410). In this case, it will be judged with being in agreement with the registration category about the proxy server 200a contained in the category information 408, since the decrypted category is category CA which is a registration category. However, temporarily, when the decrypted category is a category about other registration proxy servers and is not a registration category

about the proxy server 200a, it is judged with it not being in agreement with the registration category about 200a contained in the category information 408.

[0044] In this way, if a judgment is completed, the judgment part 402 will return these decision results to the contents offer server 300 (Step S412).

[0045] In the contents offer server 300, the contents managing department 304 receives the decision result (Step S308). From the decision result, an IP address is in agreement with the IP address of a registration proxy server, And when the decrypted category is in agreement with the registration category about the registration proxy server (Step S310). Noting that the accessed proxy server 200a is a registration proxy server and transmitted category CA is a registration category about the proxy server 200a, It is judged whether the resources which the transmitted above-mentioned URL points out are contents to which offer is permitted to the category CA (Step S312). In being contents to which offer is permitted as a result of a judgment, The contents managing department 304 reads the contents data which the above-mentioned URL shows among the contents data 308 stored in the contents storage 306 based on the transmitted above-mentioned URL, and transmits to the proxy server 200a (Step S314).

[0046] In the proxy server 200a, the access control section 204 receives the transmitted contents data (Step S224), and transmits to the client 100a with a demand (Step S226). The contents acquisition section 106 receives the transmitted contents data (Step S114), displays it on the indicator 108 (Step S116), and makes the user A peruse in the client 100a.

[0047] On the other hand, in the contents offer server 300, when the resources which the above-mentioned URL points out are not contents to which offer is permitted to category CA, the access control section 204 transmits a contents offer improper notice to the proxy server 200a (Step S316).

[0048] In the proxy server 200a, the access control section 204 receives the transmitted contents offer improper notice (Step S216), Transmit to the client 100a with a demand as it is (Step S218), and in the client 100a. The contents acquisition section 106 receives the contents offer improper notice (Step S106), displays it on the indicator 108 (Step S108), and tells that the contents required of the user A cannot be provided.

[0049] In the contents offer server 300, from the decision result transmitted from the server 400 for a judgment, even if an IP address is not in agreement with the IP address of a registration proxy server or it is in agreement from the decision result, Even if a category does not exist or it exists, when the decrypted category is not in agreement with the registration category about the registration proxy server, the access control section 204 transmits the notice of access disapproval to the accessed proxy server (Step S318).

[0050] In the proxy server, the access control section 204 receives the transmitted notice of access disapproval (Step S220), Transmit to a client with a demand as it is (Step S222), and in a client. The contents acquisition section 106 receives the notice of access disapproval (Step S110), and displays it on the indicator 108 (Step S112), and it tells that access to the contents offer server 300 was refused by the user.

[0051] When the user A wishes offer of contents according to this example as explained above, The proxy server 200a specifies the user A, and category CA to which the user A belongs is transmitted to the contents offer server 300 instead of

the client 100a, Since discernment and a check of the user A in the contents offer server 300 side are enabled, the input of ID or a password is not required of the user A when providing contents each time, and a user is released from complicatedness.

[0052] Since the contents offer server 300 transmits the information, including category CA etc., transmitted from the proxy server 200a to the server 400 for a judgment and the server 400 for a judgment is performing the user's A discernment and a check, the burden of the part and the contents offer server 300 is eased.

[0053] The contents offer server 300 not only in the information, including category CA etc., transmitted from the proxy server 200a, Since the accessed IP address of the proxy server 200a also transmits to the server 400 for a judgment and is judging both coincidence of an IP address and coincidence of a category in the server 400 for a judgment, it is accurate and can perform discernment and a check of the category to which a user belongs.

[0054] Since the proxy server 200a is enciphered and transmitted when it transmits category information, while being sent to the server 400 for a judgment via the contents offer server 300 from the proxy server 200a, there is no possibility that a third party may throw a furtive glance at category information.

[0055] C. The clients 100a-100d which constitute hardware-constitutions: of a service provision system, next the service provision system of this example, The composition of the hardware of the proxy servers 200a and 200b, the contents offer server 300, and the server 400 for a judgment is explained briefly.

[0056] Drawing 6 is a block diagram showing the hardware constitutions of the proxy servers 200a and 200b shown in drawing 1, the contents offer server 300, and the server 400 for a judgment. The proxy servers 200a and 200b, the contents offer server 300, and the server 400 for a judgment, As are mentioned above, and it is constituted by the common computer for servers and shown in drawing 6, CPU250 for performing various processings and control according to a computer program, The I/O part 252 for exchanging data etc. among various peripheral equipment, The memory 254 for memorizing the above-mentioned computer program or memorizing the data etc. which were obtained during processing, The input device 256 for comprising a keyboard, a mouse, a tablet, etc. and inputting the directions from an administrator, etc., The monitor 258 for comprising CRT, a liquid crystal display, etc. and displaying the contents of data, etc., The communication apparatus 260 for comprising a modem, a terminal adopter, a network card, etc. and performing communication with other devices via a network, It has the hard disk drive 262 for storing various data and information, and the CD-ROM drive device 266 for reading CD-ROM264 in which the above-mentioned computer program was written.

[0057] Among these, the hard disk drive 262 is equivalent to the management information storage section 206 in the proxy server 200a, equivalent to the contents storage 306 in the contents offer server 300, and equivalent to the determination information storage 404 in the server 400 for a judgment. CPU250 by reading and executing the above-mentioned computer program memorized by the memory 254 in the proxy server 200a. It functions as the user specific part 202 mentioned above and the access control section 204, functions as the information transfer part 302 and the contents managing department 304 in the contents offer server 300, and functions as the judgment part 402 in the server 400 for a judgment.

[0058] In this example, the above-mentioned computer program memorized by the memory

254 is provided with the gestalt recorded on CD-ROM264 which is a recording medium, and is incorporated in a server by being read by the CD-ROM drive device 266. The incorporated computer program is transmitted to the hard disk drive 262, and is transmitted to the memory 254 after that at the time of a startup, etc. Or it may be made to transmit the read computer program to the memory 254 directly without the hard disk drive 262.

[0059] Thus, although this example described considering it as the "recording medium" recorded so that computer reading of a computer program is possible, and using CD-ROM, In addition, a flexible disk, a magneto-optical disc, an IC card, Various media which computers, such as internal storage (memories, such as RAM and ROM) of the printed matter in which numerals, such as a ROM cartridge, a punch card, and a bar code, were printed, and a computer, and an external storage, can read can be used.

[0060] Via a network besides offer with the gestalt by which the computer program was recorded on such a recording medium, The program server (not shown) which supplies a computer program is accessed, and it may be made to incorporate from a program server in the proxy servers 200a and 200b, the contents offer server 300, or the server 400 for a judgment.

[0061] It may be made for an operating system program to constitute a part of above-mentioned computer program.

[0062] Further again, in this example, although software has realized, these may be made to realize the user specific part 202, the access control section 204, the information transfer part 302, the contents managing department 304, and the judgment part 402 by hardware, respectively.

[0063] On the other hand, as mentioned above, the clients 100a-100d are constituted by common PC, and, fundamentally, have the hardware constitutions shown in drawing 6, and the same composition. However, in the client 100a, when CPU250 reads and executes the computer program memorized by the memory 254, it functions as the contents request part 104 mentioned above and the contents acquisition section 106. The input device 256 is equivalent to the input part 102, and the monitor 258 is equivalent to the indicator 108.

[0064] D. Modification : in addition in the range which is not restricted to the above-mentioned example or embodiment and does not deviate from the gist, this invention can be carried out in various modes.

[0065] In the above-mentioned example, although it was built by computer of the different body and connected via the Internet 600 between both, respectively, the contents offer server 300 and the server 400 for a judgment corresponding to it, This invention is not limited to such a gestalt and it may be made to build the contents offer server 300 and the server 400 for a judgment corresponding to it by one computer.

[0066] Thus, management of a server can be simplified by building the service provision server 300 and the server 400 for a judgment using one computer.

[0067] Although contents were provided as service provided for a user in the above-mentioned example, using a contents offer server as a service provision server, This invention is not limited to this and can be applied to offer of software, search of a file etc., offer of disk space, and offer of various services, such as attestation, for example.

[0068] Since LAN500a and 500b assumed that it was LAN built by the school in the

[0069] Although the proxy servers 200a and 200b, the contents offer server 300, and the server 400 for a judgment presupposed that it constitutes from a computer for servers, it may be made to constitute them from common PC, a mobile computer, etc. in the above-mentioned example. Although the clients 100a-100d are also constituted from a common PC, it may be made to constitute from a mobile computer, a hand held computer and the game machine machine that has a computer function, a set top box, an e-mail sender receiver terminal, a cellular phone, etc. The clients 100a-100d and the proxy servers 200a and 200b may be connected via the Internet 600, although connected via LAN500a and 500b.

[Translation done.]

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CLAIMS

[Claim(s)]

[Claim 1] A service provision server which it is a service provision system for providing service according to a category to which a user belongs, and can provide said service, Two or more clients which each user uses, respectively in order to receive offer of said service, A proxy server which acts for access to said service provision server of two or more of said clients, Have a server for a judgment which performs a judgment about said category at least, and said proxy server, When there is a demand of offer of said service from a certain client, a user using this client is specified from information about said client with a demand, With a providing request of said service, transmit to said service provision server and category information about a category to which this user belongs said service provision server, Transmit said transmitted category information to said server for a judgment, and said server for a judgment, Judge whether based on said transmitted category information, said category to which said user belongs is in agreement with a registration category registered beforehand, return the decision result to said service provision server, and said service provision server from said returned decision result. A service provision system characterized by performing offer of said service according to said category to said client when said category to which said user belongs is in agreement with said registration category.

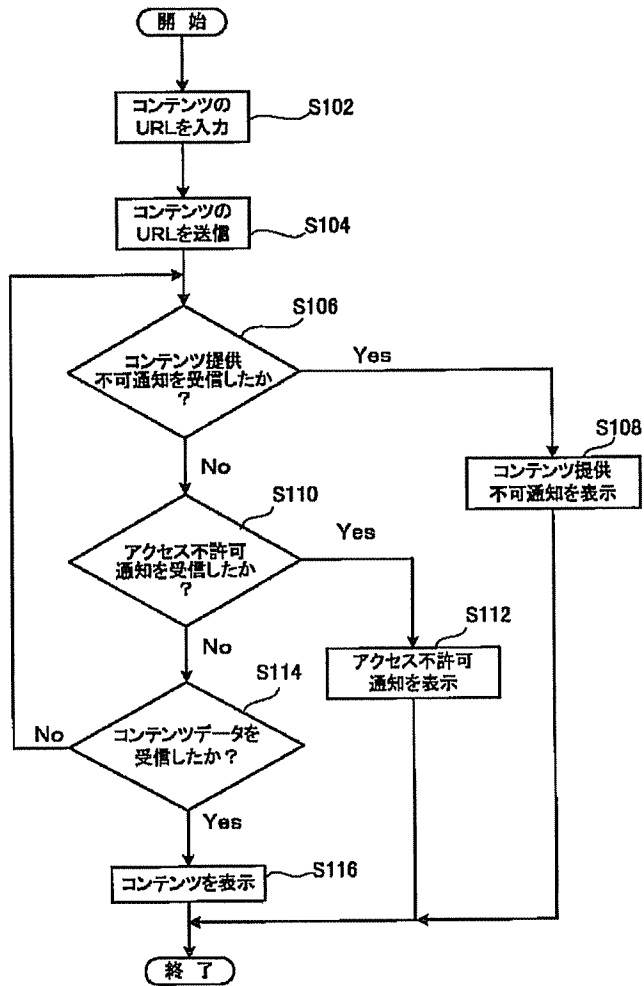
[Claim 2] In the service provision system according to claim 1, said service provision server, Transmit said category information to said server for a judgment, transmit proxy server information about said accessed proxy server, and said server for a judgment, Judge whether it is the registration proxy server into which said proxy server is beforehand registered based on said transmitted proxy server information, and in being a registration proxy server, A service provision system judging whether said category is a registration category beforehand registered about said proxy server based on said transmitted category information.

[Claim 3] In the service provision system according to claim 1 or 2, said proxy server, A data providing system enciphering said category information, transmitting to said service provision server, and said server for a judgment decrypting said enciphered category information, and judging based on decrypted category information.

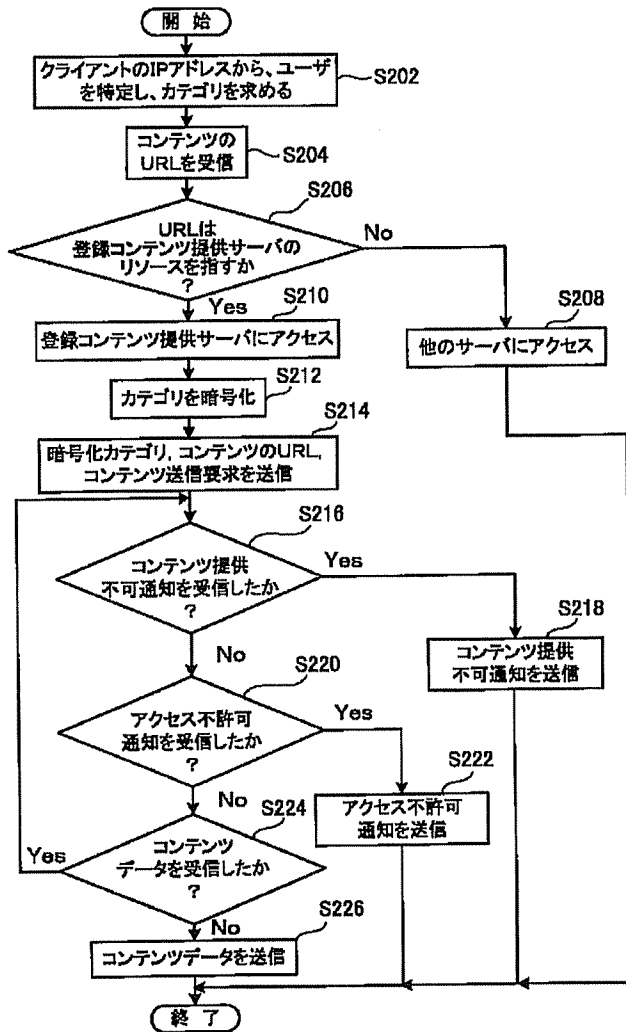
[Claim 4] A service provision system characterized by arbitrary things of claim 1 thru/or the claims 3 for which said service provision server and said server for a

judgment are built in a service provision system of one statement using one computer.

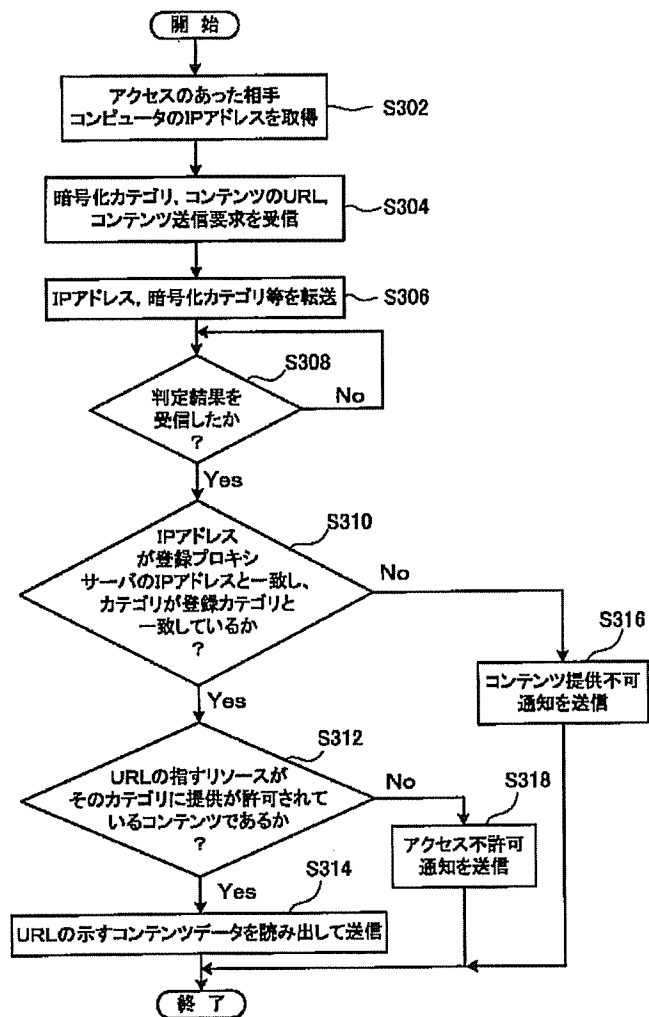
[Translation done.]



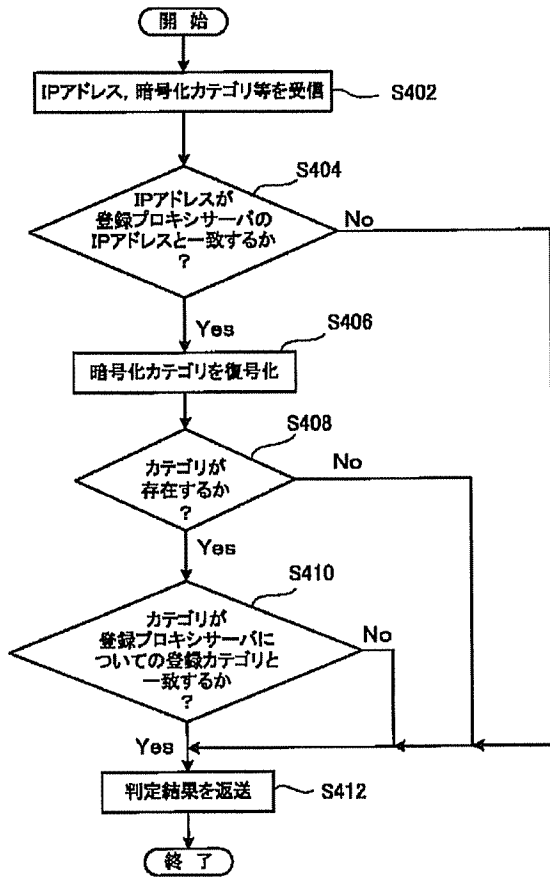
[Drawing 3]



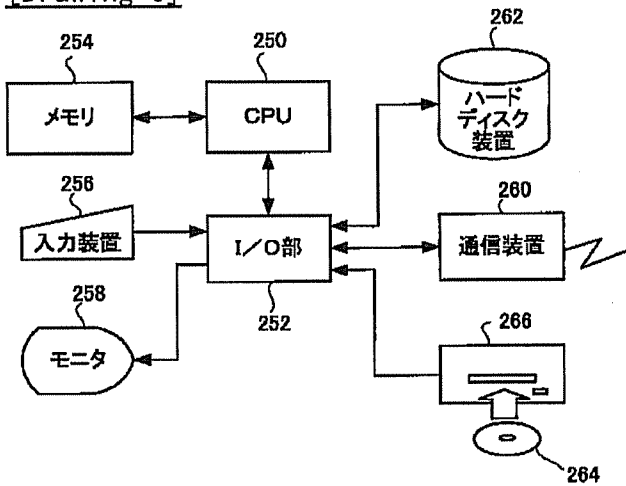
[Drawing 4]



[Drawing 5]



[Drawing 6]



[Translation done.]